

REMARKS

Claims 1-8 are pending the in the present application. No Claim stands allowed.

In the drawings:

Item 10 has been added to Figure 1;

Figures 2 and 2a have been redesignated as 2A and 2B, respectively;

Figure 9 has been amended to designate the line 10A – 10A along which the sectional view of Figure 10 is generally taken;

Figure 10a has been redesignated as 10B; and,

Figures 10B-10E have been more specifically described in new paragraph [0022] of the specification.

Replacement Sheets are enclosed for those sheets originally submitted and which have been amended by the present response. A “proof” set of the Replacement Sheets is enclosed and on which the changes made on the Replacement Sheets are marked in red for Examiner approval purposes.

Claim 1 stands rejected under 35 USC 103(a) as being unpatentable over Andersson (the ‘448 patent).

At the outset, it is noted that Claim 1 has been amended to more specifically define those steps of the claimed method which produce a container having a sidewall formed in a mold employing a blank which is of a paper material. The sidewall includes a multiplicity of cut side edges, respective ones of which are disposed adjacent and spaced apart from respective ones of others of the side edges when the blank is erected to define a carton, thereby defining a passageway between the adjacent and spaced apart side edges of the erected blank for the flow of molten plastic into and along each of the passageways. The sidewall of the erected container includes an upper portion and a lower portion both of which are defined by the blank and a passageway disposed circumferentially about the erected blank to define a demarcation between the upper portion and said lower portion of the sidewall.

Andersson, as noted by the Examiner, effects a “heat” seal along a side seam of his container to define a tube (which may be of a paper material). This is a common technique found in the formation of cartons from blanks wherein the blank

includes an outer layer of a heat sealable material, typically polyethylene, high density polyethylene or other thermoplastic polymeric material, and the marginal edges of adjacent panels of the erected carton overlap and are sealed by the application of pressure and heat, following by cooling of the polymeric material to solidify such polymeric material and bond (seal) the overlapping marginal edges of the blank panels. This technique is illustrated in the form of the side seam 2 of Figure 2 of Andersson.

In Andersson, this tube is thereafter fitted over a mandrel and tabs are formed on the top ends of the four side walls of the tube and extend radially inwardly of the open top end of the tube. Thereafter, a top is injection molded onto the top end of the tube with the injected molten plastic bonding to the infolded tabs to secure the plastic top onto the container.

Thus, Andersson requires that the paper tube be preformed before being placed in a mold for forming of the top of the container. This multiple phase process is time consuming and costly, and opens up opportunity for misalignment of the tube with the subsequently-formed top.

In Applicant's claimed method, the entire sidewall of the erected container is of a paper material (aside from the plastic employed to bond the adjacent side edges of the blank to one another) and has no requirement for first forming a tube and thereafter placing such tube in a mold. In Applicant's claimed invention, the entire sidewall is formed into an erected container (without bonded junctures of adjacent side edges of the blank) in a single step of disposing the blank in a mold. This action both forms the blank into the desired geometry of the container and simultaneously disposes the side edges of the blank in their desired adjacent, but spaced part, relationships. As claimed, this action defines passageways between such adjacent sides edges. To complete the container in the mold, plastic is injection molded into the multiple passageways, and, when solidified, bonds the adjacent side edges to one another and forms a leak-tight junction between the side edges.

In particular, in Applicant's claimed method, the sidewall of the formed container includes an upper portion and a lower portion. These portions commonly are of different geometries, requiring that the paper of the sidewall undergo some form of transition between the upper and lower portions of the sidewall. This transition may be accomplished by cutting the blank so as to specifically define the geometry of the upper portion of the erected container. Such cuts or cutouts create cut side edges

on the blank which come together when the blank is initially inserted into the mold to define the geometry of the upper portion of the container. These mating cut side edges of the blank extend circumferentially about the erected container when the container is erected and when bonded to one another by injection molded plastic, define a circumferential demarcation between the upper and lower portions of the container. This feature of the claimed invention permits one to form any of a very large variety of upper portion geometries, hence a very large variety of overall container geometries.

Andersson teaches the injection molding of a cap which is bonded to the radially inwardly extending tabs on the top ends of the four walls of the Andersson blank which has been preformed into a tubular geometry and disposed on a mandrel. This feature of Andersson limits the permissible geometry of the cap to a cap having a bottom which is identical to the top geometry of the tube. That is, if the Andersson tube is rectangular, then the bottom of the cap must also be rectangular. Contrariwise, in Applicant's claimed method, the geometry of the upper portion of the sidewall may be chosen to transition in geometry from a first geometry of the lower portion of the sidewall to a second geometry of the upper portion of the sidewall. Andersson neither teaches, discloses nor suggests this feature of Applicant's invention as defined in Claim 1, as amended.

Whereas Andersson, in that embodiment of his invention depicted in Figures 5 and 9 develops "diagonal gaps" at the four top corners of his erected carton and discloses that these corner gaps can be filled with "synthetic plastic material", it is noted that this action is only incidental to the primary function of injection molding an entire cap onto the preformed tube and is limited to a cap having a bottom whose geometry is essentially the same as the geometry of the top end of the preformed tube of Andersson.

Claims 2-6 are dependent on amended Claim 1 and therefore inherit each of the limitation of their parent Claim and any intervening Claim. Therefore, allowance of Claims 2-6 is urged for the same reasons, among others, as set forth herein above in discussing amended Claim 1.

In view of the above discussion, it is respectfully submitted that Claim 1, as amended, and dependent Claims 2-6, patentably distinguish Applicants' claimed invention over Andersson.

Withdrawal of the rejection of Claim 1, as amended, and Claims 2-6, under 35 USC 103(a) is respectfully requested.

Claims 7 and 8 have been cancelled.

Claim 1 further stands rejected under 35 USC 102(b) as being anticipated by Rumball (the '140 patent).

“Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.”

Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Company, (221 USPQ 481, 485) (Fed. Cir. 1984).

Rumball discloses the formation of a container from a blank contained in a mold. In Rumball, the side edges of the blank are disposed contiguous to one another and pressed tightly against the inner mold. This action is stated at col 2, lines 2 et seq. permits the urging of “the blank against the cavity tool by means of injected material which is thereby prevented from reaching the external surface of the blank”. Again, at col. 1, lines 47, it is noted by Rumball that the flowing injected plastic “... will not penetrate to the outside surface of the blank because that surface is already pressed hard against the surface of the cavity tool.”

Thus, Rumball fails to disclose Applicants’ claimed feature of the injected plastic overflowing each passageway and onto both surfaces of the blank in the marginal areas of each passageway. This feature of Applicants’ claimed invention provides enhanced sealing of adjacent side edges of the erected blank and imparts strength to the sealed regions of the adjacent side edges.

It is therefore respectfully submitted that Rumball fails as an anticipatory reference under 35 USC 102(b) with respect to amended Claim 1 and withdrawal of the rejection of Claim 1 as being anticipated by Rumball is respectfully requested.

Reconsideration of the application and allowance of Claims 1-6, as amended, are respectfully requested.

Respectfully submitted,



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